

Name: _____

Date: _____

Homework: Exponents/Compound Interest Review

Part One: Exponential Simplification: Simplify each exponential expression as completely as possible.

1. $a^4 a^{-8} a^{12} a^0$	2. $(-2b^4 c^{-12} d^2)^2$	3. $(e^4 f^{10} g^9)(e^{12} f^{12} g^{-1})$
4. $(h^{-12})^{-3}$	5. $i^2 + i^2 + i^2 + i^2 + i^2$	6. $(j^2)(j^2)(j^2)(j^2)(j^2)$

Part Two: Missing Indices: Find the value of the missing index in each expression.

7. $k^3 k^x = \frac{1}{k^4}$ x = _____	8. $(m^x)^{-4} = m^{16}$ x = _____	9. $n^{-x} = \frac{1}{n^5}$ x = _____
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Part Three: Compound Interest: For each problem, write the general compound interest formula, show your substitution and round your answer to the nearest cent.

10. Kirk deposited \$4,190 into a savings account with a 1.2% annual interest rate. If the interest is compounded semi-annually, how much money will Kirk have in his account after three and a half years?	11. Roger charged \$23,000 on his credit card with an annual interest rate of 18%. If the interest is compounded monthly, how much money will Roger owe after seven months?
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